A STUDY OF FACTORS AND CHALLENGES AFFECTING THE NATIONAL SKILL DEVELOPMENT MISSION PROGRAMMES IN AGRA DISTRICT

SYNOPSIS

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1. INTRODUCTION

The world has faced many industrial revolutions. Currently, we are facing the 5th industrial revolution with qualities of personalization, and deep, multi-level cooperation between machines and people. The 1st Industrial revolution began with mechanization, followed by the 2nd Industrial revolution with a focus on electrification, and division of labour. The 3rd Industrial revolution focused on automation and globalization, with automation of production through electronic and IT systems. The 4th Industrial revolution focused on digitalization, leveraging the strengths of robotics, and AI among a host of new technologies. And now the 5th is here, focussing on co-operation between people and machines. These new situations require multi-faceted skills which would enable people and especially the working masses to contribute actively in further development activities.

1.1 Relevance of Skills

There are many advantages of skills - they may be seen as solutions to the reduction of inequality and poverty, they reduce unemployment and underemployment, increase productivity, and improve standards of living; build self-esteem, confidence, leadership, and problem-solving skills. Skill development programmes are based on the four main pillars of Mobilization, Training, Placement, and Retention of trainees. Other benefits of Skill Development include improved performance, improved accuracy & quality, improved communication, compliance with rules & regulations, improved recruitment & career opportunities, and development of good customer relations.

In a seminal article titled “When will India become a developed country?” Dr. A. P. J. Abdul Kalam (2005) elaborated on India’s “core competency for integrated action” in agriculture and food processing, reliable and quality electric power, surface transportation and infrastructure for all parts of the country, education and healthcare, and information and communication technology as well as strategic sectors” - as solutions to “national problems of food, economics, and security”. Many national initiatives have been launched aimed at various aspects like PURA (Providing Urban amenities in Rural Areas), Employment generation through Entrepreneurship, Skill development initiative scheme (Initiation date: 2007-08), and Skill

development through open and distance learning, amongst others. Skill development has been accorded attention at the highest level in India in the form of the Prime Minister's National Council on Skill Development, the National Skill Development Coordination Board, and the National Skill Development Corporation.

According to Jamal and Mandal (2013), the "skills base in the Indian economy is quite low compared to other developed economies of the world". The unorganized sector in the country comprises 90% of the workforce. These skills are acquired through informal apprenticeship, with the formal training infrastructure unable to cater to its needs. This has led to a situation of a huge gap in the demand and supply situation of skills, according to the authors. A skill is a learned ability to act with determined results with good execution often within a given amount of time, energy, or both. They may be divided into domain-general (time management, teamwork, leadership, self-motivation) and domain-specific skills (used only for a certain job) in the work domain.

To address the shortage of skills, India has designed a Skill Development Programme. The objective of this programme is to create a workforce empowered with improved skills, knowledge, and employment in the global labour market. To utilize the skill opportunity associated with India's demographic dividend and labour surplus population, catering to the world having a shortage of 47 million working people (BCG study, in Jamal and Mandal, 2013), the Honorable Prime Minister launched the Skill India Mission in 2015 on the occasion of World Youth Skill Day. The objective was to channel the energy of Indian youth so that they can be more productive and self-reliant and could bridge the talent gap which has been created over time. New education policy is also a step further in this direction.

The Skill development programmes in India have faced multiple challenges. Gender considerations, especially participation by women have suffered due to reasons like lack of transportation facilities, lack of awareness of government initiatives, and societal and cultural considerations, amongst others. It is proposed to understand the nature of the challenges and enablers faced by the Skill Development Mission programme in the current study.

1.2 Government Initiatives

This section elaborates on the institutional structure, purpose, partners, status of training and schemes under the Skill India Mission programmes.

1.2.1 Institutional structure of the Skill India Mission Programme

The National Skill Development Corporation (NSDC) is a not-for-profit public limited company incorporated on July 31, 2008, under section 25 of the Companies Act, 1956 (corresponding to section 8 of the Companies Act, 2013). It aims to promote skill development by catalyzing the creation of large, quality, and for-profit vocational institutions. Further, the organization provides funding to build scalable and profitable vocational training initiatives. Its mandate is also to enable a support system that focuses on quality assurance, and information systems and train the trainer academies either directly or through partnerships. NSDC acts as a catalyst in skill development by providing funding to enterprises, companies, and organizations that provide skill training. It also develops appropriate models to enhance, support, and coordinate private sector initiatives. The differentiated focus on 37 sectors under NSDC's purview and its understanding of their viability will make every sector attractive to private investment.

The NSDC plays key roles-

- **Funding and incentivizing**: In the near term this is a key role. This involves providing financing either as loans or equity, providing grants, and supporting financial incentives to select private sector initiatives to improve financial viability through tax breaks, etc. The exact nature of funding (equity, loan, and grant) will depend on the viability or attractiveness of the segment and, to some extent, the type of player (for-profit private, non-profit industry association, or non-profit NGO). Over time, the NSDC aspires to create strong viable business models and reduce its grant-making role.
- **Enabling support services**: A skills development institute requires several inputs or support services such as curriculum, faculty training standards, quality assurance, technology platforms, and student placement mechanisms. NSDC plays a significant

enabling role in these support services, most importantly in setting up standards and accreditation systems in partnership with industry associations.

- **Shaping/creating:** In the near term, the NSDC will proactively seed and provide momentum for large-scale participation by private players in skill development. NSDC will identify critical skill groups, develop models for skill development and attract potential private players and provide support to these efforts.

National Skill Development Mission This is the flagship scheme for skill training of youth to be implemented by the Ministry of Skill Development and Entrepreneurship through the National Skill Development Corporation (NSDC). The NSDM (National Skill Development Mission) was approved by the Union Cabinet on 01.07.2015 and officially launched by the Hon'ble Prime Minister on 15.07.2015 on the occasion of World Youth Skills Day. The Mission has been developed to create convergence across sectors and States in terms of skill training activities. Further, to achieve the vision of 'Skilled India', the National Skill Development Mission would not only consolidate and coordinate skilling efforts but also expedite decision-making across sectors to achieve skilling at scale with speed and standards. It would be implemented through a streamlined institutional mechanism driven by the Ministry of Skill Development and Entrepreneurship (MSDE). Key institutional mechanisms for achieving the objectives of the Mission were divided into three tiers, consisting of a Governing Council for policy guidance at the apex level, a Steering Committee, and a Mission Directorate (along with an Executive Committee) as the executive arm of the Mission. Mission Directorate would be supported by three other institutions: National Skill Development Agency (NSDA), National Skill Development Corporation (NSDC), and Directorate General of Training (DGT) – all of which would have horizontal linkages with Mission Directorate to facilitate smooth functioning of the national institutional mechanism.

Additional Secretary, Ministry of Skill Development & Entrepreneurship (MSDE)

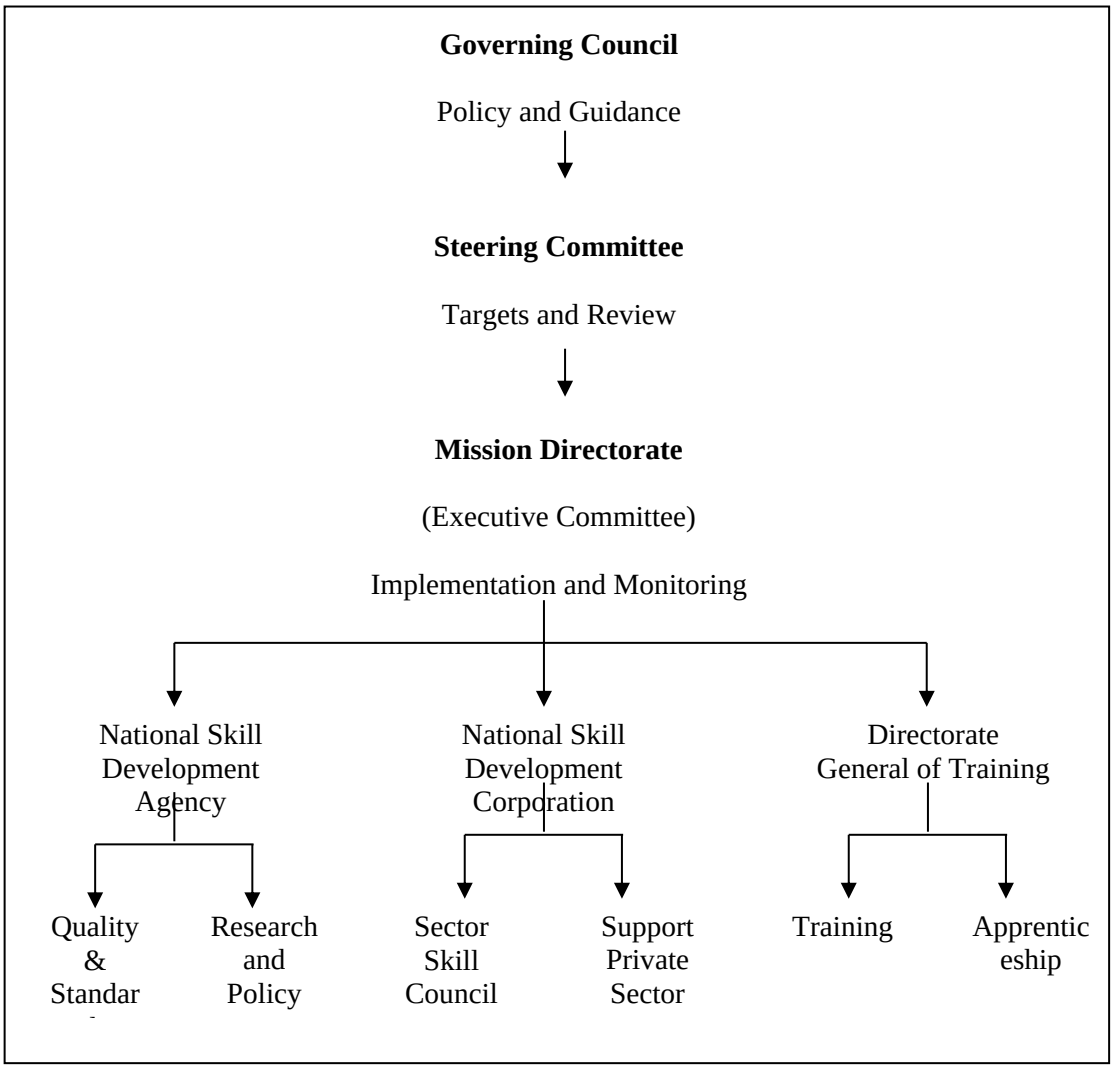

Figure 1: Hierarchical structure of the Ministry of Skill Development and Entrepreneurship

Source: https://www.msde.gov.in/en/ministers

1.2.2 Purpose of National Skill Development Mission

National Skill Development Mission was introduced by the Ministry of Skill Development and Entrepreneurship to empower the younger generation. The mission was mainly developed to ensure employment opportunities by providing training in skill development and enabling them to become self-employed entrepreneurs.

The Government would be interested in understanding the challenges that arise in the successful implementation of the program adoption of the skill training (in up) by the target beneficiaries.

Table 1: Status of Targets

Target (March 2023)	**Trained**	**Placed**	**Assessed**	**Certified**
26,79,763	11,28,208	6,63,111	9,03,023	6,68,615

Source: https://www.upsdm.gov.in/

1.2.3 Skilling Partners Of Deen Dayal Upadhyay Grameen Kaushalya Yojna

Table 2: Skilling Partners and Key Points

Key Points	Number
Trained	2,32,958
Placed	1,35,684
Number of Partners	571
Number of Projects	1,262
Number of Training Centers	1,444
Sectors Covered	50
Job-Roles Covered	584

Source: http://ddugky.gov.in/content/partners

In the budget of the fiscal year 2017 - 18 the government of India has decided to set aside Rs. 17,000 crores, the highest ever allocation to this sector, to boost the Skill India Mission. At least ten million Indian youth enter the country's workforce each year, but employment creation in India has not been able to absorb this influx, making increasing unemployment a severe problem. Through this allocation, the government aims at generating employment and providing livelihood to the millions of young Indians who enter the workforce every year.

1.2.4 Status of Training

According to the Ministry of Skill Development, which is the nodal ministry for implementing the scheme, till January 19, 2021, around 1.07 crore candidates have been trained across the country, Out of this, 46.27 lakh candidates have been given short-term training under the scheme.

Table 3: Skilling progress in Uttar Pradesh

Key Points	Number of people impacted
Training Partners	986
Training Centre	3962
Sectors	34
Courses	718
Enrolled	1174395
Under Training	22796
Trained	930132
Placed	339894

Source: https://www.upsdm.gov.in/

According to CSO, 59.30% of rural women are self-employed and the male ratio is 54.50%. This indicates that the government has been undertaking proactive steps to converge entrepreneurship in India toward the development of rural women. Through the 2nd phase of

Pradhan Mantri Kaushal Vikas Yojana, around 68.12 lakh women had undergone skill training. And also, around 4.08 lakh women underwent training during 2018-2020, and Industrial Training Institutes (ITI) completed training for 38.72 lakh women.

Skills Mission underperforms on Training, Placement Goals

The placement has fallen way short of the target of placing at least 70% of trained, certified youth. India's skills mission through the flagship Pradhan Mantri Kaushal Vikas Yojana (PMKVY) has fallen short in both training and placement in the past six years.

PMKVY trained about 6.59 million people against a target of 7.62 million in the short-term training category, according to data presented in Parliament. Of these, only 5.25 million trained people have been certified and just 2.32 million were placed between 2015 and 10 July 2021.

The placement has fallen way short of the government's target of placing at least 70% of trained and certified youth. Nearly 45% of those certified and around 35% of those trained were placed.

The scheme has 2 components

- Short-term training STT – Focused on training, certification, and placement.
- Recognition of prior learning RPL – Orientation and certification based on existing talents. RPL does not have a placement component.
- It is implemented through skills partners affiliated with National Skill Development Corporation (NSDC).
- Performance.
- PMKVY trained 6.59 Million (Mn) against the target of 7.62 Mn of these only 5.25 Mn were certified and 2.32 Mn were placed.
- Against a target of 70%, only 35% were placed.
- In Karnataka, 222378 people were trained and only 72881 were placed. This reflected poor performance at the state level also.
- PMKVY has fallen visibly short of STT targets; orientation through RPL in the past six years is 6.39 million against a target of 5.58 million. Yet, the number of people certified under RPL has been low at 5.2 million.

- The placement of STT programmes of PMKVY has been a drag both at the national and state levels.

The placements have been a challenge for all the skilling partners. This is because of the economic environment, lack of jobs traditionally, and the pandemic in the past 18 months of a skill training partner.

1.2.5 Schemes in various States

Table 4 provides insights into schemes running in various states.

Table: 4 Different Schemes running in different States:

S.no.	Name of the State	Name of Skill Rural Livelihoods Mission (SRLM)
1	Jharkhand	Jharkhand State Livelihood Promotion Society (JSLPS)
2	Uttar Pradesh	Uttar Pradesh Skill Development Mission (UPSDM)
3	West Bengal	Paschim Bangal Society for Skill Development (PBSSD)
4	Chhattisgarh	State Rural Livelihoods Mission
5	Kerala	Kudumbashree
6	Andhra Pradesh	Employment Generation and Marketing Mission(EGMM)
7	Tamil Nadu	Tamilnadu Corporation for Development of Women Ltd.
8	Telangana	Employment Generation and Marketing Mission (EGMM)
9	Punjab	Punjab Skill Development Mission
10	Rajasthan	Rajasthan Skill & Livelihoods Development Corporation (RSLDC)
11	Haryana	Haryana state Rural Livelihoods Mission (HSRLM)
12	Jammu and Kashmir	Himayat Mission Management Unit, Jammu & Kashmir State Rural Livelihoods Mission (JKSRLM)
13	Uttrakhand	Uttrakhand State Rural Livelihood Mission (USRLM)
14	Odisha	Odisha Rural Development and Marketing Society (ORMAS)
15	Maharashtra	Maharashtra State Rural Livelihoods Mission
16	Gujarat	Gujarat Livelihood Promotion Company (GLPC)
17	Madhya Pradesh	MP State Rural Livelihood Mission
18	Assam	Assam State Rural Livelihoods Mission (ASRLM)
19	Tripura	Tripura Rural Livelihoods Mission Society
20	Bihar	Bihar Rural Livelihoods Promotion Society

1.2.6 National Level schemes in Uttar Pradesh

Under National Skill Development Mission there is only one program going on that is the Uttar

Pradesh skill development mission which has different trades. NSDM is the Nodal body for auditing and implementing other schemes related to skill if assigned by Ministry. Currently, SANKALP Scheme is being implemented by Uttar Pradesh Skill Development Mission (UPSDM).

SANKALP Scheme was established on January 19 2018, and will run through March 20, 2023. SANKALP scheme is a support program for skill training schemes that focuses on quality improvement, institution strengthening, and the inclusion of underserved groups in skill training.

Skills Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP) Scheme is a World Bank loan assisted programmers of the Ministry of Skill Development and Entrepreneurship (MSDE) with three Key Result Areas (RA), namely (i) Institutional Strengthening at Central, State, and District level; (ii) Quality Assurance of skill development programmers'; and (iii) Inclusion of marginalized population in skill development programmes. The implementation period of SANKALP is till March 2023, and the positive outcome so far is seen in the following areas:

- Strengthening of the District Skill Committees leading to a demand-driven approach for the implementation of the Pradhan Mantri Kaushal Vikas Yojana (PMKVY).
- District-level Skill Planning through District Skill Development Plans.
- Focus on improving access to skill training for Women, SC/ST, and other marginalized weaker sections of society.
- The institutions strengthened so far under SANKALP are as under:
- State Skill Development Missions through State Incentive Grants.
- District Skill Committees through Mahatma Gandhi National Fellowship (MGNF) program and capacity-building training.

SANKALP is a supporting programme to skill training schemes that focuses inter-alia on the improvement of quality, strengthening of institutions, and inclusion of weaker sections in skill training.

1.2.7 District Schemes

Other schemes under the Ministry of Skill Development and Entrepreneurship running in Agra are:

The Ministry is responsible for the coordination of all Skill Development efforts across the country, the removal of the disconnect between demand and supply of skilled manpower, building the vocational and technical training framework, skill up-gradation, building of new skills and innovative thinking not only for existing jobs but also jobs that are to be created at the district level and national level as well.

1. PMKVY(Pradhan Mantri Kaushal Vikas Yojana)
2. PMKK(Pradhan Mantri Kaushal Kendra)
3. Jan Shikshan Sansthan
4. Capacity Building Schemes
5. Formation of skill Hubs
6. SANKALP (Skills Acquisition and Knowledge Awareness for Livelihood Promotion)
7. Strive
8. National Apprenticeship Promotion Scheme (NAPS)
9. Rozgar Mela
10. Skill Loan Scheme
11. DDUGKY (Deen Dayal Upadhyaya Grameen Kaushalya Yojana)

2. THEORETICAL ORIENTATION AND REVIEW OF LITERATURE

2.1 Theories of Skill Development

- **Instructional Theory for Skill development**

The theory for fostering skill development outcomes, as proposed by Romiszowski (2009), can be used for fostering all types of skills. Romiszowski defines skill as “the capacity to perform a given type of task or activity with a given degree of effectiveness, efficiency, speed or other measures of quantity or quality. He distinguishes between intellectual skills (that involve the mind), motor, sensorimotor, or psychomotor skills (that involve the body), personal skills (that involve emotions), and interpersonal skills (that involve interacting with others).

According to the theory, skills exist along a continuum of complexity from reproductive to productive. Reproductive skills are those which are focused on applying standard procedures, or automated processes. Productive skills have a much greater influence on the selection and design of instructional strategy than if a skill is intellectual, motor, personal, or interpersonal. The skills cycle involves more "open" responses in that environmental stimuli affect the decision-making and behavior of the learner/performer. The performer perceives the stimulus, recalls prerequisites based on his or her perception, plans for behavior accordingly, and exhibits behavior, or performs the response to the stimulus which affects the environment and the original stimulus which then must be acted upon again by the performer.

- **Cognitive theories of Skill Acquisition**

Production system models make a distinction between declarative and procedural knowledge, and skilled performance is assumed to be based on procedural knowledge that is not ordinarily verbalizable or available to consciousness. Neural network models rely on error detection and correction, in a manner reminiscent of closed-loop theory, to develop a distributed representation of knowledge that captures relationships between task components. Instance theories of skill acquisition are founded on the assumption that expert performance derives from the automatic retrieval of memory for individual training episodes. The instance memory approach contrasts with the schema theory of skill learning. In general, the cognitive systems described here constitute forms of representation that typically are not open to modification by intentional processes such as mental practice. They are constructed and influenced instead by direct experience with a task.

- **Conceptual Recapitulation in Skill Development Theory**

In Anderson's (1985) skill development theory, the parallel phases are declarative knowledge acquisition, compilation or proceduralization, and automatization. Achieving the desired end states equips learners to think. Conceptual recapitulation refers to a means of remediating learning problems by retracing instructional what should have been naturally occurring developmental stages for an individual (Case, Sandieson, & Dennis, 1986).

For example, in such domains as electricity (Frederiksen & White, in press). Learning is thus seen as a progression across a range of simpler to more complex mental models of a domain, as well as a progression in conceptual understanding. Learners also come with previously developed abilities and skills that may be capitalized upon as tools for learning in new domains. On the other hand, there may be deficiencies in the tool skills assumed by instruction at a given level.

2.2 REVIEW OF LITERATURE

The review of literature may be examined from the twin themes of challenges and factors Affecting the skill development programmes.

Challenges

- Maclean and Sarvi (2011) discussed the skills development issues, challenges, and strategies in Asia and Pacific Asia, where the informal sectors take up 65% of non-agricultural employment.
- Okada (2012) in his paper reviews the current state of education, skills development, and employment for Indian youth, and considers the challenges facing India's skills development system. He concluded that India faces complex and enormous challenges in fostering skills development for youth, for several reasons: the size of the youth population, and the hierarchical and segmented nature of both the labour market and society as a whole. Indeed, Indian young people fall into two main groups.
- A tiny fraction of economically well-off middle classes get good education and training and well-paid jobs in the organized sector. Meanwhile, the great majority of youth from economically and socially disadvantaged groups get very limited education and little access to vocational training. They work in the unorganized sector. The majority of Indian youth enter the labour market without adequate vocational skills, leading to unstable, informal, low-wage employment, such as casual labour and various forms of self-employment.
- Saini (2015) in her paper attempts to study the present skill capacity, and challenges in front of skill development initiatives in India along with their solutions with the help of

secondary data. In her study, she found that the vocational training level of the Indian workforce in the age group of 15-59 was found to be extremely low i.e., around 38% of the workforce are not even literate, 25% have below primary or up-to primary level of education and the remaining 36% had an education level of middle and higher level. Only 10% of the workforce was vocationally trained (with 2% formal and 8% informal training). The study also found that both the Government and its partner agencies had undertaken various measures/initiatives for the effective implementation of the skill development system in the economy, but still faced several unresolved issues/challenges that needed immediate attention from the policymakers.

- Sharma and Sethi (2015) suggested that the existing differences in the demand and supply of skills in the Indian economy should be minimized. The approach adopted involved analyzing the skill gap and appraising the existing skill development initiatives in India. It further explored the challenges facing the skills development system in India & proposed solutions that could be adopted to resolve such challenges. In their study, they concluded that Inadequate Infrastructure, Low industry interface, Low Student Mobilization, Direct admission without assessment, high cost, etc. were the prominent challenges.
- Singh and Saini (2016) in their paper tried to explore various dimensions of the Skill India Mission and highlighted the scope and challenges of the mission.
- Jagadish (2017) analyzed the opportunities and challenges of the skill development system in India and also tried to understand the demand-supply mismatch in skill development in India with the help of available secondary data and found that the size of India's formally skilled workforce was very small. He considered a lack of investment in skill acquisition as a prominent drawback. The enrolment in skill institutes like ITIs, ITCs, and polytechnics too was observed as being relatively low.
- Pai (2018) assessed the role of Non- Government Organizations (NGOs) in the Skill India Mission and suggested that they should work in synergy with the government organizations in the case of the Skill India Program.

- De (2019) discussed the issues and challenges that become a hurdle to the implementation of the 'Skill India Movement' at the ground level. The challenges faced or experienced by training partners of NSDC, Skills Councils, and other bodies were identified through Round Table discussions regarding strategizing, decision-making, and implementing the government's skills initiative. The primary data was collected through discussion and questionnaires, while the official sites of NSDC & PMKVY along with Ministry reports were referred to as well, and found that there was a need for multi-agency collaboration and focus on real value drivers.
- Munjal and Tiwari (2019) in their paper studied the state of 'skilling' of youth with a focus on the hospitality sector. They addressed the important question, "How can the skilling India initiative become the solution for the critical need for skilled manpower for the Indian hospitality industry?". With the help of their extensive secondary data analysis, they concluded that it was quite apparent that at a macro level a resolution of this challenge would require policy-level action by the government and its institutions. Implementation on the ground is always the real challenge in a country like India where corruption and bureaucratic red tape are known to kill the best of ideas. Soft skills of trained individuals, especially 'verbal English' communication was recognized as a key industry requirement for hiring employees. Domain-specific skilling gaps and challenges pointed to the culinary Domain with unique requirements.
- Mochahari and Barman (2021) described the various initiatives undertaken by the Assam Government for generating employment by skilling people and explored various challenges faced by them by applying primary data analytics. They concluded that 94% of trainees were facing the problem of unemployment due to which both males and females were highly inclined towards the initiatives for a decent livelihood.

Factors Affecting Skill Development

- Das (2015) tried to study skill development initiatives, strategies, impact, and status of skill development in India with the help of secondary data. In his research, he found that

India had one of the youngest populations in the world, a trend that is expected to continue until 2040. India's labour productivity was much lower than that of other Asian economies. A structural shift towards higher-productivity sectors requires up-skilling of the labour force to ensure the country's inclusive economic growth.

- Khan and Pal (2016) assessed the association of FDI inflows in India with skill development programmes. They concluded that FDI was not strongly related to employment in India. No association or even negative association between FDI and labour process in India was observed. If India wanted to create an increase in employment through FDI the main priority should be to generate skilled labor.
- Sharma and Nagendra (2016) studied the current state of vocational education and training. They reviewed the vocational training models of emerging economies with the help of available data not only from India but also from Brazil and China. They found that the "demographic dividend" explained India being the youngest workforce country in the world. The country had the lowest median age much below that of China and the Organization for Economic Co-operation and Development (OECD) Countries. Consequently, India could the largest provider of the workforce to the world. But still, India has difficulty in filling up jobs due to a shortage of applicants with the right skills and knowledge. This paper brought up the difficulty faced by the country in matching the jobs to the skills available. India was behind countries like China and Singapore in imparting skills. The paper was relevant in analyzing the current skill gaps in the country and the areas where there was a huge scope of supply of skilled workforce. It aimed to identify the challenges faced in the development of skills in the country and highlighted the employment opportunities arising in the different sectors with an emphasis on the Make in India campaign.
- Dixit et. al., (2017) in their research tried to analyze the appropriateness of policies developed by the Indian Government to impart skills among the employees of the construction industry. They applied trend analysis of construction productivity and other

skill indicators over a period from 1999 to 2010. They observed a significant relationship between skill development and construction productivity.

- Pandey and Nema (2017) in their paper tried to assess the impact of the Skill India Mission on the youth of India. A primary data survey of 60 respondents helped identify the hurdles encountered in the programme. The popularity of the various schemes was shown based on good response among the youth, as many of the selected respondents have undergone the skill development programme under the different area which helps them to develop the quality of skills and also motivate them in their overall development. The survey indicated that the respondents had faced severe problems in setting up their businesses even after receiving training.
- Iyengar and Mishra (2017) in their paper tried to conduct a SOAR (Strengths, Opportunities, Aspirations, and Results) analysis of the 'Skill India' mission by analyzing five flagship initiatives under the scheme. The study objective was to understand the extent of skilling initiatives launched and to identify their achievements toward inclusive growth. SOAR analysis as a research method in this study focused on current strengths, opportunities, aspirations, and results aligning with the future vision of the 'Skill India' programme for achieving national goals. Extensive analysis and synthesis of related literature on the initiatives suggested wide-scale skilling implementation by the government in collaboration with industrial and private institutions for inclusive national growth objectives. The study highlighted crucial aspects and successful implementation which could guide policymakers and practitioners to further improvise organizational development design for the larger benefit of the economic ecosystem.
- Silva et al., (2018) investigated the concept of skill shortage, causal factors, and mitigation measures relevant to the Sri Lanka construction industry using already available secondary data. They found that there were three issues in the industry: the shortage of people, skill mismatch, and skill deficiency. Mainly there were shortages of people in the construction industry of Sri Lanka in the categories of unskilled workers (laborers), craftsmen,

construction machine operators, and experienced construction professionals. This review identified sixteen possible causal factors for skill shortage and sixteen mitigation measures. Skill shortages are often seen as a problem in the education system of the country. But this review suggested that one needs to have a much broader perspective on the issue of skill shortage. The problems of attracting, training, and retaining people in the construction industry of Sri Lanka were also discussed.

- Arora & Chhadwani (2018) observed that countries with elevated and superior levels of skills adjust more effectively to the provocation and golden opportunities of the world of work.
- Sudheer and Arunachalam (2019) assessed the various dimensions of the Digital India Program, initiated by the government of India, to examine the contributions of the digital revolution in enhancing the skill and expertise of rural youth. They assessed the various skill-developing programs launched by the Government of India in the era of digitalization with the help of secondary data published in various magazines and gave a detailed explanation of various schemes being run by the government of India at various levels of society.

Ongoing Scheme and Programme

- Shah (2016) conceptualized the ongoing schemes and programs for sustainable development and inclusive growth initiative undertaken by the present government. He highlighted the key role played by the educational and training initiatives of the government to empower the rural youth which contributed to the Make in India Initiative of the Government of India.

2.3 Summary Statement

To summarize the literature review highlighted the following challenges faced by trainees, trainers, and mobilizers.

Challenges faced by Trainees

- For programmes aimed at developing entrepreneurship skills, Hazarika (2016) reviewed

the situation associated with the State Institute of Rural Development, Assam. A few aspects which required continued focus were generating opportunities for self-employment (p. 64), development of leadership skills (p.64), development of technical skills (pp.64-65), efficient allocation of resources for asset building (p.65), enabling women to set up entrepreneurship (p.65) and enhancing awareness about the schemes amongst the trainees. While the researcher has advised on the progress of the scheme, he has not stated the reasons why the remaining trainees were unable to fulfill their goals on this front.

While the government expected that some of the PMKVY trainees would create their firms, only 24% of the trainees started their businesses, and out of them, only 10,000 applied for loans to the Ministry of Rural Development (MORD) (Singh & Sharma, 2013).

- Lack of adequate facilities and infrastructure may be faced by trainees at the ITI (Okada, 2012, p. 184).
- Concerning training provided by Industrial Training Institutes (ITI), the centrally driven courses provided may be unable to meet local industry needs (Okada, 2012, p. 184). Hence from the perspective of trainees, undertaking a course may be useless, affecting their motivation to enroll or complete a course. Further, for trainees absorbed in the informal sector, their skill certificates may not be recognized by the firms (Okada, 2012, p. 184). The same sentiment is echoed by Subung and Barman (2021). Further, as a career opportunity of being absorbed as an Apprenticeship post-completion of skill courses from ITIs, trainees face limited opportunities for apprenticeships with firms (Okada, 2012, p. 184). All these problems lead to the problem of dropouts which leads to the youth being unemployed and unskilled (Kumar, 2021, p.224).
- Dash and Dash (2020) observed that the training and placement issue remains unaddressed in the context of the Skill India Movement. In this context, Sharma (2016, p.28) observed that the Standard Training Assessment and Re-ward (star) scheme, oriented at rewarding trainees who got skilled and certified was perceived more as a way for funding their training cost, which was not used in the right perspective. The Star scheme did not have a way to monitor whether the skills obtained were employable, or of relevance to the industry.

- Kumar (2021, p.225) observed from the research conducted by Abhishek and Aditya (2015), that trainees also faced the challenge of not being able to enroll in a course of their choice basis merit. This was because a historically associated gender bias with certain skills was observed in the context of associated courses. Hence some courses had more women trainees and others had more men trainees.

Challenges faced by Trainers

- Monitoring: According to Hazarika (2016), training should be provided at the block levels in a phased manner to enable the monitoring of trainees.
- Low Industry Interface: Most of the training institutes have a low industry interface as a result of which the performance of the skill development sector is poor in terms of placement records and salaries offered.
- Employees' Unwillingness: India's joblessness issue is not only a skill problem; it is respect to the lack of appetite of SMEs for Industrialists and its impact on job creation.
- Insufficient Training Capacity: Sharma (2016, p. 29) pointed to the need to evaluate the capacity available with the training agencies and hence, trainers to deliver training as per the National Level Quality Assurance framework.

Challenges faced by Mobilizer

- Mohandas (2019, p.150) observed that Mobilization is enlisting skill-training aspirants who meet the qualifications laid down for job roles by the Sector Skill Council. These skill training targets are given with several criteria: (1) Geographical - that the skill training beneficiary is from within the state of the sponsoring organization (State Skill Mission) (2) Social - that the beneficiary is from a particular region/district in the state that is either backward or targeted for development (3) Caste - that the beneficiary is from a backward class/scheduled caste in case the sponsoring organization is backward/scheduled caste development corporation (4) some sponsoring organizations mandate the inclusion of a certain percentage of women among the beneficiaries and (5) most importantly that at least 70% should get employed at the end of the training programme.

- Mohandas (2019, p.152) observed from the conducted research on mobilization that one of the challenges faced is the duration of the course. Most youth find it difficult to stay committed to attending a programme for 8 hours each day that lasts a month. If they feel they are not learning much in the first few days, they just drop out. The training provider does not have any leverage over the candidates to continue attending the training sessions. Added to this many of them have sundry daily paying jobs which means loss of earnings for a month or more.
- Mohandas (2019, p.152): With multiple skill training providers chasing the same set of youth, especially in rural areas and Tier II and III towns, promises of higher income and jobs involving contemporary technology/lifestyle sways the candidates. There is one instance in Andhra Pradesh where a group of youth mobilized for skill training as painters were weaned away with promises of indoor jobs with higher salary potential.
- Sharma (2016) has observed that the biggest challenge associated with vocational education is mobilization (p.25). Factors that lead to a lack of "voluntary interest" among students were a lack of awareness about skilling programmes and a negative social perception of vocational education.
- Sharma (2016) also pointed to the fact that some Institutions artificially increase the fees, which causes issues in enrolling.
- Mobilizers find it challenging to find trainees who are "aspirational" and have the "right attitude towards career building" (Singh & Pathak 2019, p.19). In 2017, out of 30 lakh people who entered the job market, only 3 lahks received job offers, pointing to the presence of a demand-supply gap (p.17).
- "Mobilization also requires enabling industry linkages for job placements. Fostering connects with the industry for placements are a tricky business especially since India has a greater number of job-ready candidates than the actual job opportunities" (Singh &Pathak 2019, p.19).
- Low Student (trainees) Mobilization: The enrolment in skill institutes like ITIs and

polytechnics remains low as compared to their enrolment capacity. This is due to the low awareness level among youths about the skill development programmes.

- **Table 5: Factors Affecting National Skill Development Mission Program**

S. No.	Authors	Year	Factors Affecting (NSDMP)											
			Role of Higher Education System	Types of Skills	Government Expenditure of NSDM	Needs Of Industry & Global Market	Infrastructural Issues	Targets to private partner for skill program	Demographic Factors: Age of Trainees, employment opportunity to	Government Policy	Opportunity to Increase Competitiveness in Dynamic Global	Impact of Socio-economic Factors	Perception about Negative Effect of Wages of Future Prospects	Level of Literacy 74%
1	Sadgopal	2012											✓	
2	Bhiwa	2013			✓									
3	Sangar	2013							✓					
4	Kaptan	2014	✓			✓								
5	Misra	2015				✓								
6	Karandeep & Amandeep	2015	✓					✓						
7	Chavda and Trivedi	2015							✓					
8	Hazarika	2016					✓							
9	Deka & Batra	2016								✓				
10	Pandey & D.K.	2017										✓		
11	Munjal and Tiwari	2018		✓										
12	Gupta &Agarwal	2018		✓										
13	Singh & Pathak	2019												✓
14	Jamal & Kasturi	2013									✓			

- **Table 6: Challenges in National Skill Development Mission Program**

	Challenges in National Skill Development Mission Program(NSDMP)																					
S. No.	**Authors**	**Year**	**Variables**																			
			Low student mobilization	**Unemployment & Unskilled Workforce**	**High Cost**	**Lack of Technical Knowledge**	**Lack of Low Vocational Training to Socio-economically weaker section**	**Unorganized Sector**	**Government and Partner Agencies faced Unsolved Issues**	**Low up skilling of Labour Force**	**Monitoring of Training & Trainees**	**Insufficient Training Capacity**	**Need to Increase Involvement Ratio**	**Unexperienced Training Partners**	**Lack of Awareness about the Programme**	**Direct Admission without Assessment**	**Geographical Problem**	**Skill Deficiency**	**Low Performance of the Trainees or Worker**	**Entrepreneurship Skill**	**Lack of Technical Knowledge**	**Training & Placement issue**
1	Sharma & Sethi	2015	✓		✓											✓						
2	Kumar	2015				✓				✓											✓	
3	Okada	2012					✓															
4	McClean, Jagannathan & Sarvi	2011						✓			✓											
5	Saini	2015							✓								✓					
6	Nagendra	2016																✓				
7	Debpriya	2018												✓								
8	Subung & Barman	2021		✓																		

9	Hazarika	2016									✓				✓					✓		
10	Sinha	2015																		✓		
11	Chavda & Trivedi	2015										✓										
12	Dash and Dash	2020																				✓
13	Singh & Pathak	2019											✓									
14	Mohandas	2019																				
15	Sharma	2016										✓										
16	Kumar	2021		✓																		

3. RESEARCH GAP:

A lot of studies have taken place in this area but most studies are conceptual. The previous studies do not cover the specific challenges faced by Mobilizer, trainers, and trainees of the National Skill Development Mission in the Agra district. Studies cannot also evaluate their hypotheses using sophisticated tools, which present a chance for Research to enlarge the area of their investigations by using larger sample size and sophisticated tools. None of the studies focused on the Agra district which provides an opportunity for the Researcher to study the National Skill Development Mission and its effect on Agra. Agra is an industrial center for the shoe industry, tourism, silver, *Petha* & *dalmoth*. Further, the Government launched a scheme "one district one product" which has set a goal of employing 25 lakh people in five years in UP, which may require skilled labour, Agra is a leather footwear hub across the up, Further the MSME sector in Agra requires skilled labour which aims to give a boost to micro, small and medium enterprises (MSME) is a consequence of the investors with a tagline of Nayi Udaan, Nayi Pechan so, The government's various programmes and schemes that call for trained labour and increase the employment rate in a district benefit from the skill development mission programme as well.

4. NEED OF THE STUDY

The present research study is important in identifying the programme level, institutional level, and individual-level challenges faced in goal attainment. If the study is not conducted an opportunity to improve and solve challenges will be lost.

Indians experienced multiple challenges during the COVID-19 pandemic. One of them was the loss of livelihood. Further, an opportunity has been seized by many organizations to adopt modern and advanced technologies which require, that India's workforce adapt to and learn new skills. Management of these programmes at the district level hence offers an opportunity to study the Mission intensively and at the ground level, which policy-level studies may neglect. It is important for policymakers to analyze the contribution of the National Skill India Mission and to look for the difficulties encountered to reform the problems to enable it to function at its full potential.

5. OBJECTIVES OF THE STUDY

The following objectives are aimed to be studied in the present research.

1. To identify the factors associated with the National Skill Development Mission programmes in Agra District.
2. To prioritize the factors identified which are associated with the National Skill Development Programme.
3. To identify the challenges faced by trainees in program completion.
4. To identify the challenges faced and enablers of Stakeholders at the project implementing agency with respect to placement and enrollment goals
    - Trainees (Placement goals)
    - Trainers (Placement goals)
    - Mobilizer (Enrollment goals)

6.0 RESEARCH METHODOLOGY

6.1 Research Design

- The present research is exploratory and analytical.

6.2 Scope of Study

- Project Implementing Agency, Trainers, Trainees, and Mobilisers in Agra District

6.3 Sources of data

- Data will be collected from primary and secondary sources

6.4 Types of data:

- Primary data will be collected with the help of a self-structured questionnaire, personal interviews, and from experts/representatives at workshops through NGT. Secondary data will be collected from published reports of various implementation agencies and government bodies.

6.5 Data Collection Tools

(i) Research objective 1: To identify factors associated with the National Skill Development Mission programmes in Agra District.

NGT (Nominal group techniques): Nominal Group Technique (NGT) is a structured method for grouping brainstorming that encourage contributions from everyone and facilitates quick agreement on the relative importance of issues, problem, or solutions. The group members of the NGT will be drawn

from the PIAs operating in Agra District (Annexure 1). Personal interviews may also be held to gauge the views of management staff, trainees, and trainers to develop a preliminary statement of need.

Steps :

1. Preliminary Statement of Need
2. Silent Idea Generation
3. Round-Robin Recording of Ideas.
4. Serial Discussion of ideas
5. Preliminary Voting
6. Discussion of Preliminary Voting
7. Final Discussion

(ii) Research Objective 2: To prioritize the factors identified which are associated with the National Skill Development Programme.

AHP (Analytical Hierarchy Process)

AHP is a mathematical tool of problem-solving that has become popular amongst management personnel in the late 1990s and early 2000s. The AHP method has been created after understanding the structure of the problem and the real hindrance that managers face while solving it.

(iii) Research Objective 3: To identify the challenges faced by trainees in programme completion.

Note-

- According to Delp (1977), the ideal size of a group in an NGT should be 5 to 9 members.
- The extant literature on AHP applications in management and engineering studies indicates that there is no strict requirement on the minimum sample size for AHP analysis. Some studies used sample sizes ranging from four to nine.
- AHP may be applied to responses of large as well as small groups; however, the number of respondents may depend upon the nature of the problem and the availability of experts.
- Sample Size Overall – Approximately 300, based upon Slovin's Formula

The sample size will be determined with help of Slovin's formula, where the sample size of the finite population (Known) (where the population is less than 50,000) will be used to arrive at a representative number of respondents (Slovin's 1960).

$n = N/(1+Ne^2)$

n = Sample Size of the population

N = Population Size

e = Desired level of Precision/ Margin of Error at 5%

n =34000/ (1+34000/5/100)2

n = 34000/(1+34000*1/400)

n = 34000/(1+85)

n = 34000/86

n = 395.34

Based on the calculation of sample size, the preliminary sample size is computed to be 395.34

Sample size=395 is the Trainees and Trainers and Mobilizer 10% of the sample has been taken from the total population.

(iv) Research Objective 4: To identify the challenges faced and enablers of stakeholders at the project implementing agency with respect to placement and enrolment goals (Trainer, Trainees, and Mobilizes).

Summary of RM with Data collection tools & Sample size

Table 7: Objectives using the data collection tools & sample size

Research Objectives	**Data Collection Tools & Sample size**
1. To identify the factors associated with National Skill Development Program in Agra District.	NGT (Nominal Group Technique): 6-9 group members in an NGT
2. To prioritize the factors identified which are associated with the National Skill Development programme.	AHP (Analytical Hierarchy Process): 4-9 experts
3. To identify the challenges faced by trainees in program completion.	Survey 395
4. To identify the challenges faced and enablers of stakeholders at project implementing agency with respect to placement and enrollment goals.	Focus group interview, Personal interview: 8-10

6.6 Sampling Techniques

- The technique of sampling is Stratified Random Sampling

- The sample will be further classified into Trainees, Mobilizers, and Trainers, Managerial Staff subdivided into the male and female categories.

6.7 Research Methodology Summary

Table 8: Objectives with data analysis tools in RM

Research Objectives	Data Analysis Tools
1. To identify the factors associated with National Skill Development Program in Agra District.	NGT (Nominal Group Technique)- Weighted Average
2. To prioritize the factors identified which are associated with the National Skill Development programme.	AHP (Analytical Hierarchy Process)
3. To identify the challenges faced by trainees in program completion.	Descriptive Analysis
4. To identify the challenges faced and enablers of stakeholders at project implementing agency with respect to placement and enrollment goals.	Descriptive Analysis

7. PROPOSED CHAPTERS

Chapter 1: Introduction

Chapter 2: Theoretical framework and literature review

Chapter 3: Research Methodology

Chapter 4: Findings and Analysis

Sub-Chapter 1. Factors associated with the National Skill Development Mission Programme in Agra district.

Sub-Chapter 2. A Prioritization of factors affecting the National Skill Development Mission Programmes in Agra District.

Sub-Chapter 3. Challenges and Enablers: Mobilizers, Trainers and Trainee perspective of the National Skill Development Mission Programme in Agra District.

Chapter 5: Conclusion

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Annexures

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ANNEXURE 1

Project implementing agencies working in Agra District under Skill Development Programme

Training Partner	Trades	PAST 2 YEARS					
		Enrolled		Trained		Placed	
		M	F	M	F	M	F
Nehru Yuva Kendra	Cutting & Sewing Training	0	103	0	103		67
	Computer Basic Training	66	64	66	64	37	29
	Beautician Training	0	25	0	25		17
	Cell Phone Repairs And Service	29	2	25	2	14	2
	Computerized Accounting	32	-	29	-	14	-
	Debt Recovery Agents	25		25	-	25	-
	Debt Recovery Agents	16		16	-	16	-
	Goat Rearing	22		22	-	15	.
	KVICPMEGPEDP - 417	16	2	15	2	14	1
	Edp To PMEGP Beneficiaries	14	4	13	4	11	4
	KVICPMEGPEDP - 417	15	3	15	3	13	3
	Edp To PMEGP Beneficiaries	7	2	7	2	7	2
	Dairy &Vermi Compost Making	-	35	-	35	.	32
	Beauty Parlour Management	-	35	-	35	.	6
	Dairy &Vermi Compost Making	21	-	21	-	9	-
RUDSET Institute, Agra	Two Wheeler Mechanic	27	-	22	-	12	-
	Cell Phone Repairs And Service	35	-	31	-	21	-
	Electric Motor Rewinding &Pump set Maintenance	29	-	26	-	14	-

	Refrigeration And Air-Conditioning	35	-	30	-	19	-
	Computer Hardware And Networking	35	-	31	-	16	-
	Dairy &Vermi Compost Making	35	-	35	-	17	-
	Cell Phone Repairs And Service	29	-	29	-	10	-
	Computerized Accounting	27	3	24	3	11	-
	TV Technician	32	-	23	-	14	-
	Photography & Videography	26	-	21	-	13	-
	Entrepreneurship Desktop Publishing	28	2	21	2	8	1
	Dairy &Vermi Compost Making	27	1	27	1	14	1
	KrishiUdyami	17	-	15	-	10	-
	Dairy &Vermi Compost Making	35	-	34	-	6	-

Candle Making	-	35	-	34	-	6
Beauty Parlour Management	-	35	-	33	.	5
Womens Tailor	-	35	-	29	-	5
Cell Phone Repairs And Service	33	-	33	-	13	-
Computerized Accounting	23	9	17	9	8	2
Refrigeration And Air- Conditioning	34	-	33	-	19	-
Financial Literacy For FLCRPS	-	18	-	18	-	-
Edp To PMEGP Beneficiaries	20	2	20	2	18	2
Dairy &Vermi Compost Making	22	-	19	-	8	-
Edp To PMEGP Beneficiaries	15	1	14	1	5	1
GhareluVidyutUpkaranSeva Udyami	22	-	20	-	6	-
Mushroom Cultivation	-	25	-	21	-	2
Mushroom Cultivation	-	20	-	16	-	2
Beauty Parlour Management	-	35	-	34	.	1
Womens Tailor	-	32	-	29	-	2
EDP To PMEGP Beneficiaries	5	5	5	5	4	3
Candle Making	-	35	-	35	-	-
Computer Hardware And Networking	26	2	24	2	6	-
Cell Phone Repairs And Service	30	-	27	-	1	-
Dairy &Vermi Compost Making	24	1	21	1	14	1
Refrigeration And Air- Conditioning	35	-	34	-	5	-
Two Wheeler Mechanic	27	-	22	-	1	-
Electric Motor Rewinding & Repair Services	25	-	23	-	4	-
Computerized Accounting	29	4	26	4	4	-
Refrigeration And Air- Conditioning	33	-	29	-	4	-
Photography & Videography	23	-	17	-	5	-
Mushroom Cultivation	30	-	27	-	4	-
Cell Phone Repairs And Service	35	-	34	-	5	-

Dairy &Vermi Compost Making	25	-	24	-	6	-
Beauty Parlour Management	-	35	-	34	-	2
Womens Tailor	-	28	-	24	-	-
EDP To PMEGP Beneficiaries	21	6	18	6	2	-
Edp To PMEGP	8	2	8	2	1	1

	Beneficiaries						
	Cell Phone Repairs And Service	29	2	25	2	14	2
GITI Agra	Electrician	14550			13600		5340
	Fitter	5910			5450		2220
	Electronics Mechanic	160			120		50
	Draftsman Civil	360			290		120
	Copa	640			560		130
	Motor Mechanic Vehicle	80			70		30
	Tractor Mechanic	80			70		30
	Mechanic Diesel	160			130		25
	Instrument Mechanic	80			70		30
	Draftsman Mechanic	120			110		35
Action Point Samiti	Banking & Accounting Fashion Design	172	142	170	140	0	0
Eduguru India Pvt. Ltd.	Electronics & Hardware, ICT, Tourism & Hospitality	411	99	162	40	0	0
Euprexis Expert systems Consultant Pvt.	ICT	216	135	216	135	0	0
Fuzonee-systems Pvt. Ltd.	Banking & Accounting	41	67	40	60	0	0
GITI Agra	Electrical	96	12	21	0	0	0
Lal Bahadur Shastri ShikshaSamiti	Electrical	60	156	60	156	10	12
Mahendra Educational Pvt. Ltd.	Garment Making, ICT	63	73	63	73	16	35
Monash International Ltd.	Apparel, Made-Up& Home Furnishing Automotive, Electronics & Hardware, Leather &Sports Goods,	216	294	216	294	30	49
National Institute for Technical Training	Tourism & Hospitality	84	24	84	24	10	10
NIFA Info comp Services Pvt Ltd	Banking & Accounting Electrical, Retail	729	433	729	433	45	32
Process and Product Development Centre, Agra	Fabrication	27	0	27	0	0	0
Orion Security Solutions Pvt. Ltd	Garment Making	0	108	0	0	0	0

Rooman Technologies	Electronics & Hardware, ICT	468	123	468	123	0	0
RSWM Limited	Retail	270	0	213	0	114	0
Safe Educate Learning Pvt. Ltd.	Logistics	61	56	61	56	15	10
SamajKalyankariSarasvati Sabha	Automotive Electrical, ICT	178	225	170	225	25	30
SankalpVikasSamiti	Apparel, Made-Up&Home Furnishing Electrical, Electronics &Hardware, Fashion Design, Garment Making	536	350	535	350	39	46

St Joans Education Society	Electronics & Hardware, Tourism & Hospitality,	229	164	229	164	15	10
The Apparel Training and Design Centre	Apparel, Made-Ups&Home Furnishing	01	49	01	49	0	0
CFTI	Lather	136	145	132	1411	237	398
		08	16	77	6	7	5
NULM	Banking And Accounting	22	30	22	30	12	20
	Fashion Design-Apparel Ornamentals	2	114 4	2	24	0	16
	Fashion Design- Accessories	0	235	0	235	0	80
	Electrical-Electrician Domestic	26	0	26	0	15	0
	Electronics-Repair &Maintenance Of Domestic Electric Appliances	25	0	25	0	14	0
	Retail-Retail Operations	12	08	12	08	7	5
	ICT-Accounts Assistant Using Tally	25	10	25	10	15	5
	Healthcare General Duty Assistant	25	35	0	0	0	0
	Power- Electrician Domestic Solutions	30	0	0	0	0	0
Govt. Leather Institute Agra	Leather Technology (Tanning)	29	0	39	0	22	0
	Leather Technology Footwear	57	0	58	0	44	0
	Computer Science &Engg.	64	9	55	12	17	4
DIC	ODOP Training & Tool Kit	220	450	220	450	35	12
	Stone Carving	12	25	12	25	12	10
	Tailor (SC/OBC Scheme)	23	104	23	104	30	35
	Shoe Upper Tailoring	15	30	15	30	5	6
	Beautician	02	43	02	43	8	25